

Notice of Allowability

Application No.

10/730,671

Examiner

Naghmeh Mehrpour

Applicant(s)

GOLDBERG ET AL.

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 8/11/06.
2. ☒ The allowed claim(s) is/are 1-35.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

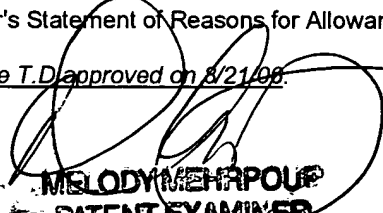
Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input checked="" type="checkbox"/> Other <u>The T.D. approved on 8/21/06</u> |


MELODY MEHROUPOUR
PATENT EXAMINER

DETAILED ACTION

Allowable Subject Matter

1. **Claims 1-35**, are allowed.

The following is an examiner's statement of reasons for allowance:

Regarding **claims 1, 9, 16-18, 25, 31, 33**, the present application teaches a method and system for coordinating the use of beam forming between two communicating entities in a wireless communication system is disclosed. The two entities may communicate control information regarding their respective use of beam forming. A correction factor for at least one entity is provided wherein said entity may reduce or withhold its beam adjustment in order to correct any error measured in the alignment of its beam with respect to the beam of the other entity with which it is communicating as specifically mentioned on claims 1, 9, 16-18, 25, 31, 33.

The closest prior art to the present application such as Etkin et al. (US Publication 005/0036464 A1) teaches systems and methods that use the number of mobile stations, denoted by N , communicating with a base station, as a variable that determines the optimum induced change rate, R , and the antenna beam width, W , of a time-varying base station antenna gain pattern used in conjunction with a forward power modulation (FPM) or to maximize the overall data throughput from the base station by taking advantage of multi-user diversity. In one embodiment, the FPM scheme is turned off if

N is below a lower threshold. If N is above this threshold, the FPM scheme is turned on with R and W set to appropriate values. In Etkin a base station adjusts a beam width and SINR fluctuation based on the number of mobiles stations in a sector served by the base station. Further Etkin discloses that for a small number of users a broader beam is better whereas a highly directional beam is better for a large number of users. The disclosures of Etkin teaches two beams from two communicating entities, but just an effect of beam sweeping by the base station. Etkin fails to disclose a scheme of measuring an error in alignment of two beams emanating from two communication entities, determining a correction factor based on the measured error, and readjusting the beams to realign the two beams. Etkin two communicating entities do not communicate during the initial state before forming operation and throughout the communication process. Etkin entities do not know whether the other is adjusting a beam direction for fixing the misalignment of the two beams. Therefore, there is possibility of oscillation caused by simultaneous adjustment by the two entities. Etkin fails to teach avoiding this oscillation, only one entity is selected to adjust its beam in order to realign the beam as specifically mentioned on claims 1, 9, 16-18, 25, 31, 33.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

2. **Any responses to this action should be mailed to:**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Naghmeh Mehrpour whose telephone number is 571-272-7913. The examiner can normally be reached on 8:00- 6:00.

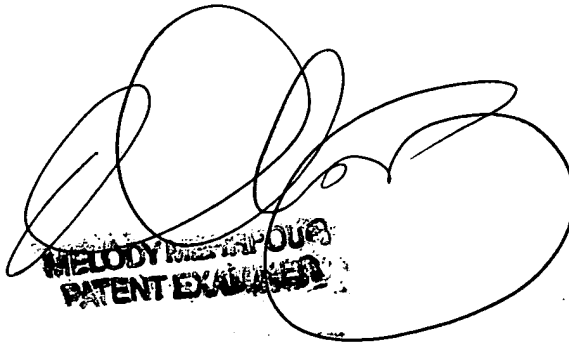
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nick Corsaro be reached (571) 272-7876.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

NM

September 17, 2006



MELODY MEHROUR
PATENT EXAMINER